

Table Q-4: Recent Trends in U.S. Greenhouse Gas Emissions and Sinks using the TAR GWPs (Tg CO₂ Eq.)

Gas/Source	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
CO₂	4,998.5	4,943.2	5,045.9	5,157.3	5,261.0	5,305.9	5,483.7	5,568.0	5,575.1	5,665.5	5,840.0
Fossil Fuel Combustion	4,779.8	4,733.0	4,836.0	4,950.9	5,047.2	5,085.0	5,266.6	5,339.6	5,356.2	5,448.6	5,623.3
Natural Gas Flaring	5.5	5.6	5.1	6.5	6.6	8.7	8.2	7.6	6.3	6.7	6.1
Cement Manufacture	33.3	32.5	32.8	34.6	36.1	36.8	37.1	38.3	39.2	40.0	41.1
Lime Manufacture	11.2	11.0	11.4	11.6	12.1	12.8	13.5	13.7	13.9	13.5	13.3
Limestone and Dolomite Use	5.2	5.0	4.5	4.1	5.2	7.0	7.4	8.4	8.2	9.1	9.2
Soda Ash Manufacture and Consumption	4.1	4.0	4.1	4.0	4.0	4.3	4.2	4.4	4.3	4.2	4.2
Carbon Dioxide Consumption	0.8	0.8	0.9	0.9	0.9	1.0	1.1	1.3	1.4	1.6	1.4
Waste Combustion	14.1	15.8	16.3	17.2	17.9	18.6	19.6	21.3	20.3	21.8	22.5
Titanium Dioxide Production	1.3	1.3	1.5	1.6	1.7	1.7	1.7	1.8	1.8	1.9	2.0
Aluminum Production	6.3	6.4	6.3	5.8	5.1	5.3	5.6	5.6	5.8	5.9	5.4
Iron and Steel Production	85.4	76.2	75.0	69.9	73.6	74.4	68.3	76.1	67.4	64.4	65.7
Ferroalloys	2.0	2.0	2.0	2.0	1.8	1.9	2.0	2.0	2.0	2.0	1.7
Indirect CO ₂	30.9	30.7	30.5	29.5	29.3	29.5	28.9	28.4	28.2	27.0	26.3
Ammonia Manufacture	18.5	18.7	19.5	18.7	19.5	18.9	19.5	19.5	20.1	18.9	18.0
Land-Use Change and Forestry (Sink) ^a	(1,097.7)	(1,085.6)	(1,091.1)	(1,113.8)	(1,117.8)	(1,110.0)	(1,108.1)	(887.5)	(885.9)	(896.4)	(902.5)
International Bunker Fuels ^b	113.9	119.9	109.9	99.8	98.0	101.0	102.3	109.9	112.9	105.3	100.2
CH₄	713.3	713.0	719.3	710.7	715.5	720.2	705.0	693.7	686.8	679.6	673.0
Stationary Sources	8.6	8.8	9.1	8.6	8.6	9.0	9.2	8.2	7.7	8.0	8.2
Mobile Sources	5.4	5.3	5.4	5.3	5.3	5.2	5.1	5.0	4.9	4.8	4.8
Coal Mining	95.4	91.7	89.1	76.3	77.0	80.5	74.9	74.6	74.4	69.8	66.8
Natural Gas Systems	132.8	134.4	136.4	141.3	139.5	137.6	138.7	134.4	133.9	129.9	127.4
Petroleum Systems	28.9	29.3	28.3	27.4	26.9	26.5	26.3	26.3	25.6	24.4	23.9
Petrochemical Production	1.3	1.3	1.4	1.5	1.6	1.7	1.7	1.8	1.8	1.8	1.8
Silicon Carbide Production	+	+	+	+	+	+	+	+	+	+	+
Enteric Fermentation	140.1	139.3	142.6	140.7	142.5	145.9	141.9	138.8	136.8	136.4	135.7
Manure Management	32.0	34.1	33.6	34.6	37.0	38.1	37.5	39.3	41.6	41.1	41.0
Rice Cultivation	7.8	7.7	8.6	7.7	9.0	8.3	7.6	8.2	8.7	9.1	8.2
Agricultural Residue Burning	0.7	0.7	0.8	0.7	0.9	0.7	0.8	0.8	0.9	0.8	0.9
Landfills	233.7	233.5	236.4	238.6	238.5	237.3	231.6	226.0	220.1	222.4	222.9
Wastewater Treatment	26.6	26.9	27.6	28.0	28.7	29.3	29.6	30.2	30.5	31.0	31.4
International Bunker Fuels ^b	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1
N₂O	369.8	375.1	384.5	383.8	409.3	400.8	411.0	410.4	407.1	404.4	406.1
Stationary Source	12.2	12.1	12.4	12.5	12.8	12.9	13.4	13.6	13.7	13.9	14.3
Mobile Sources	48.6	50.8	53.9	55.9	57.3	57.7	57.4	57.0	56.5	56.0	55.7
Adipic Acid	14.2	14.0	12.1	13.3	14.7	17.1	17.0	11.0	7.4	7.3	7.7
Nitric Acid	17.0	17.0	17.5	17.7	18.7	19.0	19.8	20.3	19.9	19.2	18.9
Manure Management	15.3	15.8	15.6	16.0	16.0	15.6	16.0	16.3	16.3	16.4	16.7
Agricultural Soil Management	255.0	257.9	265.5	260.7	281.8	270.6	279.4	284.1	284.9	282.9	284.1
Agricultural Residue Burning	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Human Sewage	6.7	6.9	7.0	7.1	7.4	7.3	7.4	7.6	7.7	8.0	8.1
Waste Combustion	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2
International Bunker Fuels ^b	0.9	1.0	0.9	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9
HFCs, PFCs, and SF₆	91.1	85.5	87.3	91.8	90.7	97.8	111.9	117.6	129.8	122.9	125.1
Substitution of Ozone Depleting Substances	0.9	0.8	1.7	5.5	8.5	22.6	32.3	39.9	47.4	54.4	61.5
Aluminum Production	16.8	14.6	13.5	12.8	11.3	10.9	11.5	10.1	8.3	8.2	7.3
HCFC-22 Production ^c	35.9	31.6	35.8	32.6	32.4	27.7	31.9	30.8	41.2	31.2	30.6
Semiconductor Manufacture ^d	3.3	3.3	3.3	4.1	4.6	6.8	6.3	7.6	8.4	9.0	8.5
Electrical Transmission and Distribution ^e	29.0	30.2	28.0	31.7	29.2	24.6	24.9	22.7	18.7	14.4	13.4
Magnesium Production and Processing ^e	5.1	5.1	5.1	5.0	4.8	5.1	5.1	6.4	5.7	5.7	3.7
Total	6,172.7	6,116.8	6,237.0	6,343.6	6,476.5	6,524.8	6,711.7	6,789.6	6,798.8	6,872.3	7,044.3

^a Does not exceed 0.05 Tg CO₂ Eq.^a Sinks are only included in net emissions total, and are based partially on projected activity data. Parentheses indicate negative values (or sequestration).^b Emissions from International Bunker Fuels are not included in totals.^c HFC-23 emitted^d Emissions from HFC-23, CF₄, C₂F₆, C₃F₈ SF₆, and the addition of NF₃^e SF₆ emitted

Note: Totals may not sum due to independent rounding.